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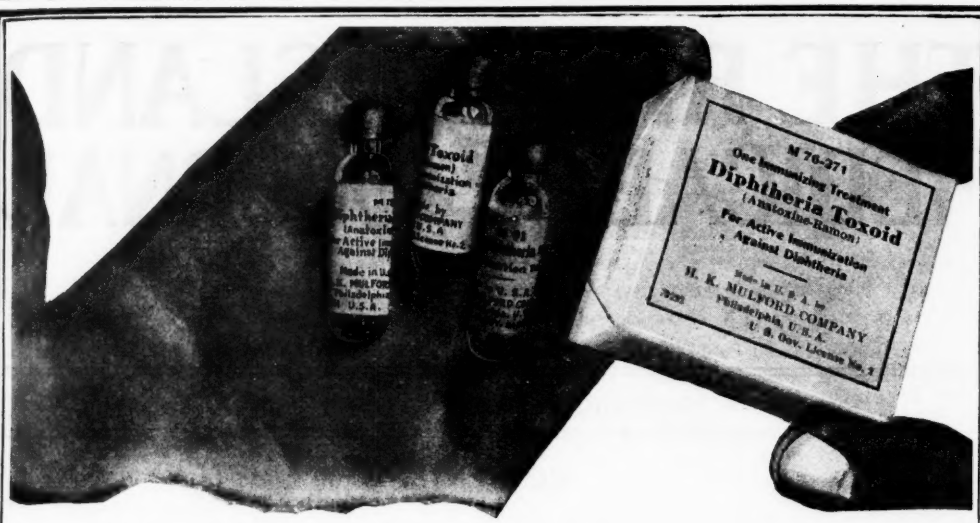

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ORIGINAL ARTICLES

PRESIDENTIAL ADDRESS*

By Dr. Norman M. MacLeod

Newport, R. I.

The annual address of the President of the Rhode Island Medical Society should contain information concerning medical affairs in the state, constructive criticism in the correction of defects, and stimulation in the furtherance of the ideals of the medical profession.

Information: There are certain needs that I wish to bring before the Society. We should have available to the members of the Society a roster of all the members. At present, the card catalogue is the only available source of information. One of our sister societies of New England prints an annual list in connection with its journal, and this would seem to be a practicable method for our Society.

Group insurance is a matter that is being investigated by a committee of the Society. Whether this is desirable is open to question, but it should be given definite consideration. There are examples of methods carried out in several states that will be helpful to the committee.

Another committee of the Society has been appointed to determine the needs for a new building, and also to consider possible locations. Our inanimate population has grown so rapidly that it takes the present available space. It is quite important that our books, which are a real asset to the Society, be given some consideration. Our present location allows of expansion in only one direction. Whether another story added to the present building would give us a room that would be quieter than our present auditorium is a question. Another phase of this problem, and one that is important, is that of parking. In order to attend meetings, our members must be transported, and the parking problem is one that will not grow less in future years.

*Read before the Rhode Island Medical Society June 7th, 1928.

Our legislative committee has been on the watch during the year, and the new legislation has been mostly of a progressive nature. The chiropractic bill, which contained many objectionable features as first presented, was so changed that it gave but little advantage to the chiropractors. It has been the intention of the committee and has been the policy of the officers of the Society to co-operate as far as possible with all health agencies interested in legislation, and it is gratifying to be able to state that there has been the finest co-operation during the year.

Another committee of the Society that has been doing good work is the Committee on Education. Education is one of the duties of our Society, and as in the charter of the Society we are termed a Medical Society, "based on liberal principles," we should always be a leader in educating the public. The short talks that have been kindly broadcast by the station of the Outlet Company are a proper means of bringing to the public the best in preventive and curative methods. It would seem desirable that the Society extend its usefulness by recounting in some form the great achievements of modern medicine, either in the form of Healthgrams that are used by some organizations, or by the methods employed successfully by the Toledo physicians.

Constructive Criticism: In my visits to the component societies, the question of programs seemed to be one of the important problems. It is difficult to have any definite policy in regard to programs in small societies, but it does seem desirable to make some attempt. In the programs presented to the Society during the past year, the aim has been to find something that will interest different groups of men. For instance, the papers have embraced public health, contagious diseases, internal medicine, surgery, ophthalmology, endocrines, pediatrics, anatomy, orthopedics and military medicine.

The attendance at medical meetings is always a problem, and will remain so in both large and small societies. The problem seems to be one of interesting the young man in medicine. How many faithful attendants there are of medical

societies in the county, state and nation who are beyond the sixty year mark? Without them we would make a sorry showing, but the future of the Society is in those in the third and fourth decade. Some means must be found to reach these men, and a regular all-round program may be one of the means.

Medical ethics is a question that is difficult to introduce into meetings, but it is a vital need in our profession. This subject was discussed at two of the county society meetings, and it seemed to be the consensus of opinion that we in the medical profession had a double standard of ethics, one for the general practitioner, and another for the specialist. Of course, this is not true, but it is true that many of the profession who claim to be specialists have, by their questionable conduct, hurt the reputations and standing of the real specialists. There is room for specialism in medicine, and the real progress of medicine started with the development of specialties. It behooves us all, general practitioners and specialists, to see to it that we are not responsible for the lowering of the standard of medical ethics. One layman, John St. Loe Strachey, has faith in the profession, as shown by the following statement: "I say, without the slightest fear that I may be overstating my case, that there is no profession which is more exposed to the temptation to forget honor, humanity and kindliness than the medical profession, and none in which the exploitation of human suffering is easier. Yet there is none in which the temptation is so triumphantly withstood."

Finally, what can be said to give stimulation to those who find little of idealism in the medical profession. The two factors that seem to lead to pessimism are the development of community medicine and the menace of the cults. First as to the cults: Cults have always been in existence and will continue as long as human credulity is as it is. As one man has stated, "There are three things which almost every person gives himself credit for understanding whether he has taken any pains to make himself master of them or not. These are, 1, the art of mending a dull fire; 2, politics; 3, physic." How many times have we listened to a patient confessing that they had tried certain remedies suggested by friends or relatives. To descend to the level of the adherents of some of these cults would be a death blow to our ideals. Time is the regulator that will help to chase away our pessimism. In one of the cults—chiropractic—the founder and fountain head, B. J. Palmer, sees the handwriting on the wall. His school at Davenport, Iowa, which at one time had 3,500 students has now but 300. In an address at Philadelphia on February 26, 1928, he spoke as follows: "Fully eighty per cent. of the chiropractors in Pennsylvania are practicing medicine, not chiropractic. My ideals concerning chiropractic are shattered. Chiropractic is doomed. You have drifted so far from the basic principles of chiropractic that you have lost your identity and brought the basic science bill upon your heads. You cannot defeat the ends of science. Twenty-eight chiropractic schools have closed recently, and many others will follow." Real medical science will proceed to the end of time in spite of cults past, present, and those to come.

Community medicine means to many physicians that the public is usurping the functions of the profession in educating and caring for the people. There are some persons and some agencies that are too enthusiastic, and would welcome the advent of real state medicine, but the rank and file of the public still have faith in the profession. Real progress is the result of individual investigation, and state medicine would tend to lessen individual activity.

The community needs the physician in furthering the ideals of preventive medicine, and surely the profession needs the public. There must be co-operation. Heywood Brown, the columnist, has this to say about medicine: "In the long run, the heretics or reformers, call them what you will, return to the hospitable arms of Mother Medicine. Sometimes the vast majority of organized practitioners seem set and sealed against well demonstrated innovation, but in the long run truth will prevail." If we, in our generation, can leave the practice of medicine a little better, we will not have lived in vain. We should always realize that ours is a real profession, and we can say that Descartes, the French philosopher, was right when in the seventeenth century he said: "If ever the human race is raised to its highest practical level, intellectually, morally and physically, the science of medicine will perform that service."

PHASES OF THE ETIOLOGY AND TREATMENT OF ABSCESS OF THE LUNG*

By Frank B. Berry, M.D.

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(Clinics of Drs. J. A. Miller and A. V. S. Lambert)

Lung Abscess

In any consideration of abscess of the lung the terminology should be so defined that a clear understanding may be had of this condition. According to our conception of the disease the diagnosis of lung abscess should be limited to that group of cases in which one or more true abscesses are present in the parenchyma of the lung. The pathology of such an abscess is definite. The walls consist of collapsed alveoli and bronchioles with the lung tissue itself infiltrated with polymorphonuclear leucocytes, while still further peripheral is a greater or lesser zone of soggy oedema and pneumonitis. Eventually the centre of the abscess begins to break down and is then coughed up as a bronchial communication becomes established. When healing commences the surrounding oedema and pneumonitis first subside and a typical circumscribed abscess with a soft and liquefying centre remains. With still further repair the inflammatory exudate in the abscess wall disappears, necrosis and sloughing cease, the surrounding alveoli are gradually reaerated and then reexpand, and finally only a small fibrous scar remains.

In gangrene of the lung the picture differs. Again, where the infection occurs primarily in the bronchial tree there are both a different pathology and clinical course. In bronchiectasis many bronchiectatic or bronchiolectatic abscesses may be present and these are often loosely considered as lung abscesses. With them, however, we have no concern and such instances have been carefully excluded from the groups here considered. On the other hand, bronchiectasis is sometimes secondary to the imperfect healing of what was originally a true abscess of the lung parenchyma. These cases have been included.

Two other types of abscess may be mentioned in passing, neither of which, however, presents the characteristic pathology nor the clinical syndrome of primary acute abscess of the lung. The first of these is the pyemic abscess, always multiple, seen in the frank bacteremias. The second is the small subpleural abscess so frequently associated with influenza and streptococcus pneumonia followed by empyema.

As to the mode of production of a lung abscess considerable difference of opinion prevails. One school of workers thinks it is always embolic in origin. Experimentally Cutler and his associates have repeatedly produced the characteristic lesion in dogs by injecting an embolus into the jugular vein. These experiments were well conceived and the method is ingenious. The embolus was very large, however, and contained two distinct foreign bodies as well as a heterogeneous collection of infective material. Lambert and Weeks, working with blood clots infected with pure anaerobes and using a similar technique are at present proceeding along this line in New York. Furthermore, clinically these abscesses frequently appear between the first and third weeks in a postoperative convalescence, which without other recognized pulmonary complications is exactly the time when emboli are prone to occur.

On the other side are those who believe that abscess of the lung is due to aspiration of infective material. Smith, of Raybrook, has written extensively on the subject and with brilliant experimental work has shown beyond question that an abscess may be produced by aspiration. Still more recently Allen and Crowe, each using quite different methods, have further demonstrated this. It seems most probable, therefore, that an abscess of the lung may be produced either by the lodgment of a septic embolus or by aspiration, or by a bland embolus plus infection in the upper air passages.

Sex

It has been found that lung abscess is about three times as common in males as in females. Our own series bear this out. In the first there were 45 males and 15 females; in the second 31 males and 9 females; and in the third 19 males and 7 females. This gives a total of 95 males and and 31 females.

*Read before the Providence Medical Association, May 7th, 1928.

Etiology

In going over these cases it was striking to note in how many instances no definite etiological facts could be found. In other words abscess of the lung does not necessarily follow pneumonia or some other respiratory condition but very frequently exists as an abscess from the start. In our first group of cases 22 out of 60 were idiopathic; in the next group of 40, 14 were idiopathic; and in our last group 12 out of 26 were of this type. In other words 48 out of 126, or 38% of our entire series, were spontaneous in origin. Of the total 126 cases 16 (12.7%) followed tonsillectomy; 17 (13.5%) followed other surgical procedures; 33 (26.2%) followed pneumonia or other chest conditions; 3 followed tooth extraction; 3 followed immersion; 1 followed foreign body inhalation; 2 followed trauma to chest; 1 followed trauma elsewhere; and 2 were associated with long history of cough and hemoptysis.

Bacteriology

Our bacteriologic studies have been so far decidedly fragmentary and limited to cultures taken at operation. Until recently we have not cultured the sputum. In the cases in which cultures were made anaerobic bacteria, fusiform bacilli, spirilla and spirochaetes, and sometimes large streptococci were uniformly present. These were usually the only organisms to grow, although occasionally an ordinary aerobic staphylococcus or streptococcus was also found. During the last two or three years a good deal has been written about spirochaetosis of the lungs. The organisms referred to are the same varieties found so frequently or uniformily in lung abscess. Rarely they may even be found in the blood stream. Whether or not they are of true primary pathogenic importance or are secondary to one of the ordinary pyogenic organisms is as yet undetermined although there is increasingly strong evidence in favor of the first hypothesis.

Duration of Symptoms

The duration of symptoms before coming under observation we consider most important from the standpoint of treatment and prognosis. In 48 patients the symptoms were of less than 1 month duration. Forty-three patients had had symptoms for 1-3 months; 14 from 3-6 months; and 21 for over 6 months. We believe the prognosis is best if treatment is started early, certainly not later than three months after onset.

Our results have justified this belief and are as follows, (this table based on 86 cases).

Table I

Under 1 Month (33)			1-3 Months (33)		
Cured	23	(70%)	Cured	11	(33.3%)
Died	6	(18%)	Died	13	(39.3%)
3-6 Months (8)			Over 6 Months (12)		
Cured	2	(25%)	Cured	5	(41.7%)
Died	3	(37.5%)	Died	4	(33.3%)

A few patients were classed as improved. They are those whose abscesses were chronic and whose symptoms were ameliorated only while they were under some form of treatment. We believe that under activity or strain such as abscess usually becomes active again.

Symptoms

A wide variety of symptoms may be present. The most important triad, occurring in about 70-75% of the patients, is pain in the chest, cough and sputum. Other, though less frequent symptoms, were chills and fever, hemoptysis, foul breath, dyspnea, loss of strength, and hoarseness.

Signs

Abscess of the lung, in spite of its extensive pathology and pronounced X-ray findings often gives surprisingly few physical signs. The most constant of these are first, dullness, and second, fine rales. Even the most extensive lesions may give only slight impairment of resonance and it is astonishing to note how relatively infrequently changes can be noted in breath or voice sounds or fremitus. Furthermore such variations as these may be are quite inconstant—with the signs sometimes increased, sometimes diminished, or both. There are rarely signs of actual cavitation. Clubbing of the fingers and toes is a frequent accompanying manifestation and may occur as early even as the first month.

Location of Lesions

In 89 cases the lesion occurred on the right, and in 35 cases on the left side. In 2 instances

the lesion was bilateral and multiple abscesses were noted six times.

In 51 cases of our series the upper lobes were involved, and in 67 the lower lobes were affected. The right middle lobe was the site of the lesion in 7 instances.

Treatment

Treatment may proceed along one of four main courses or with combinations of them. These are first, expectant treatment with postural drainage and rest; second, bronchoscopic; third, pneumothorax; and fourth, surgery. At first we established surgical drainage as soon as the diagnosis of abscess was made. This was accompanied by a terrific mortality (71%) and it soon became evident that some other plan would have to be sought. Since then our regimen has been quite the opposite. We have not confined ourselves to any one method of treatment but have done what would seem to us at the time most likely to give the best result in the case at hand.

The two most important guides are the changing picture as seen in X-ray films taken usually at weekly intervals and frequent staff conferences on each individual case.

The patient is at first put upon absolute bed rest and postural drainage three or four times a day. This usually consists of the patient hanging with his head and trunk over the side of the bed and twisted so as to bring the bronchial communication at the most dependent portion of the abscess. If this is not effective some other position is sought that will facilitate drainage. This position is maintained for from five to twenty minutes at a time until the cavity is well drained out. Patients are almost immediately conscious of their increased comfort and of long periods of freedom from cough and soon learn for themselves the appropriate time interval between treatments. This postural drainage alone was employed in 59 cases. Of these, 33 (55.9%) were cured, and 10 were improved.

The Bronchoscope

If for any reason progress is not satisfactory the patient is referred to bronchoscopic examination and suction. We have felt that bronchoscopy, although of tremendous aid and value in accurate localization and sometimes in the treatment of an abscess, is yet not entirely devoid of danger even in the most expert hands. It must always be regarded as a major procedure and should be performed only by skilled operators. By it paroxysms of coughing may be induced, which, in turn, may bring about the rupture of the protecting adhesions of a cortical abscess, and an ensuing most virulent and fulminating pyopneumothorax.

Inasmuch as somewhat over half of the cases of lung abscess can be cured by the simple regime of postural drainage alone it has seemed to us wiser to hold the bronchoscope rather in the reserve than in the front line of treatment. Furthermore its most brilliant results are obtained in the centrally located abscesses, which usually respond readily to simple postural treatment.

Pneumothorax

We have had only a limited experience with artificial pneumothorax as a primary treatment of lung abscess. In our opinion it is a form of therapy that must be used with extreme caution and only in properly selected cases. It is accompanied by two very real sources of danger; 1—rupture of a cortical abscess into the free pleural cavity due to tearing of adhesions, and, 2—the shutting off of drainage. Both of these sequelae have been seen in our clinic. In certain centrally located abscesses, however, it may be of great benefit, for here there is no danger of rupture, and if carefully administered, drainage may be facilitated and more rapid healing promoted.

Salvarsan

Whether or not the use of salvarsan intravenously, where the Wasserman is negative, is of any real value, we are unable to say. Certainly it must be used early in the disease if any benefit is to be expected, but such cases show a high percentage of recoveries anyway. It will sometimes unquestionably cause a disappearance of odor from the sputum but beyond that we feel it is of very limited value.

Foci of Infection

If other foci of infection are present such as infected sinuses or teeth, these should be adequately treated, otherwise they may act as a

constant source of re-infection for the abscess in the lung. This has been well demonstrated recently by Crowe experimentally and others have made similar observations clinically. Of our last 40 cases 10 were noted to have had bad teeth, in 3 the teeth were only fair, in 6 they were in good condition, and in 21 no mention of them was made. This we feel is of real importance as the teeth and sinuses should be carefully considered.

Surgery

In a certain number of instances after six to twelve weeks of careful conservative treatment the abscess becomes stationary as shown in the roentgenograms. The surrounding pneumonitis has disappeared and now only the abscess itself with its fibrous wall is seen in the films and fails to improve further. Under continued conservative treatment the patient may maintain a subjective improvement, but his abscess still remains and under strain of any sort may recrudesce with the reappearance of acute symptoms and spread of lung involvement. If this does not happen the abscess becomes chronic with organized fibrous walls incapable of reaeration and re-expansion. The optimum time for surgical drainage is just before this last development supervenes when such an abscess has reached the limit of its progress under the various conservative forms of treatment and before its wall has begun to organize. It is now a purely local lesion with the surrounding lung healthy. Nothing further is to be gained by delay and the surgical risks increase just as up to now they have diminished. If the abscess is cortical the chances are that protective adhesions have already formed thus facilitating the surgical approach. In cases of chronic lung suppuration the risk of cerebral involvement, either by abscess or embolus, is estimated to be about 12%. The risk of hemorrhage, operative or post-operative, likewise increases due to the tough chronic inflammatory tissue, which tends to keep the vessels open rather than collapsing promptly about them. For the same reason the chronic abscess cavity tends to persist as the walls are then incapable of reaeration. This results in a permanent bronchial fistula communicating with a chronic cavity of greater or lesser size, and if the fistula closes a fresh abscess ensues. In any event a surrounding bronchiectasis is liable to develop. In short if operation is too long delayed in this group of cases the mortality increases to approach even that where surgical drainage is established in the early acute stages of the disease.

Table II

Series	No. of cases	No. operated upon	% cases operated	Cured	Improved	Died	Operative mortality
First	29	14	48.3	4	0	10	71.5
Second ...	31	13	41.9	7	1	5	38.5
Third	40	20	50.0	9	7	4	20.0
Fourth ...	26	6	23.1	2	0	4	66.6

From the above table our increasing conservatism is at once apparent. Of our last 26 cases less than a quarter came to operation. Hence these six patients were those in whom all other forms of treatment had failed and were of the most difficult sort. An analysis of their deaths is interesting and is typical of the deaths seen in chronic lung suppuration. The first patient died following his fifth Graham cautery operation for bronchiectasis. He had been operated upon for his abscess successfully ten months previously and made a good recovery. Symptoms reappeared and an extensive bronchiectasis was found from which he eventually died.

The second died of a pneumonia of the opposite lung in his post-operative convalescense.

The third died of cerebral embolus following operation.

The fourth had an abscess at the hilus of the middle lobe communicating with a large bronchus. Following operation she seemed unable to aerate her lungs sufficiently and died on the third day.

Our cases are grouped into four series. In the first surgery was resorted to as soon as the diagnosis was made. In the later series a conservative regimen of treatment has been followed throughout.

The following table shows the complete results of the four series of cases analyzed.

TABLE III

Series	No. of cases	Cured	Improved	Not improved	Died	% mortality	% cured or improved
First	29	11	2	4	12	41.4	45.0
Second	31	14	5	4	8	26.0	61.0
Third	40	19	17	0	4	10.0	90.0
Fourth	26	16	1	2	7	26.9	65.5
Total ...	126	60	25	10	31	24.6	67.4

SUMMARY AND CONCLUSIONS

One hundred twenty-six cases of primary abscess of the lung have been considered.

From the standpoint of treatment these cases belong in two series; a smaller one of 29 cases where surgery was used as soon as the diagnosis was established; and a larger in which surgery has assumed an increasingly minor position due to a well established and properly executed regimen of conservative treatment built upon the principle of rest and drainage by posture with the aid of the bronchoscope, pneumothorax, and salvarsan whenever such assistance seemed indicated.

Under such a system of therapy it can be reasonably expected that almost 70% of cases will be eventually cured.

In order to insure the best results there must be the closest co-operation among the internist, surgeon, roentgenologist, and bronchoscopist with no one type of treatment applicable throughout in all cases.

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TRANSFUSION OF BLOOD*

By JULIUS G. KELLEY, M.D.

PROVIDENCE, R. I.

Transfusion is a therapeutic procedure usually considered, and not infrequently, definitely indicated in the treatment of many diseases of the blood. Perhaps no single therapeutic measure surviving to the present day has had such a long and variable history in legend and fact as has the transfusion of blood, even antedating circumcision in its hypothetical geneology. It has really become useful and valuable only recently due to the attention and serious consideration stimulated by the study of the iso-aggultination phenomena in 1909-1910 and especially during the World War.

With the beginning of the 20th century came the recognition of iso-agglutination and the phenomena attendant upon the incompatabilities of human blood. This knowledge was used mainly as a possible diagnostic point in disease and no trial application to blood transfusion was made. This was probably due to the fact that the procedure was in a period of disfavor.

The first transfusion to be done at the Rhode Island Hospital and I believe the first in Providence, was performed by Dr. E. B. Smith in 1904. The blood was given by the direct method, using a Crile tube to anastomose the radial artery of the donor with a vein at the elbow of the recipient. The blood was given by a friend to combat shock and hemorrhage traumatic in origin. The patient had no reaction and made an uneventful recovery.

The period from 1908 to the present time has brought great success and demonstrated the usefulness as well as the limitations of this procedure. In 1909 Janski showed that all human beings are divided into four groups in regard to the aggultination reaction of their R. B. C. and sera. Landsteiner also described similar findings on a different group of people about this time. In 1910 Moss brought out a table which was the exact similar to that of Janski and Landsteiner except that he had numbered his group in exactly the reverse order. The grouping generally ac-

*Read before the Providence Medical Association, April 2d, 1928.

cepted in this country is that compounded by Moss and will be that used in this paper. The types are:

I. Universal recipient—can take blood from all groups, but can give blood only to Type I.

II. Can take blood from Types II and IV only and can give to Types I and II.

III. Can take blood from Types III and IV and give to I and III.

V. Can take blood only from Type IV but is the universal donor.

The mechanism of auto agglutination is still largely a matter for speculation. The Moss grouping may be shown in a diagram.

		Donor			
	Types	I	II	III	IV
Recipient	I	0	0	0	0
	II		0		0
	III			0	0
	IV				0

The following table gives approximately the relative frequency of the four blood groups.

Group I, 5%; Group II, 40%; Group III, 10%; Group IV, 45%.

The testing of compatability of bloods can be done by agglutination tests in two ways.

The obvious method is, of course, to test the reaction of the cells of the donor with the serum of the recipient and the serum of the donor with the cells of the recipient. If both tests are negative it indicates that the two bloods are compatable for transfusion. Such tests do not tell us to what group the individuals belong nor do we necessarily care, for we aim to transfer blood of one group to the same group.

However it is often desirable, and in certain instances simpler to identify the group of both patient and donor. This may be done by having available known sera of groups II and III and a suspension of red cells from the blood to be tested. Such a procedure is possible because, as will be seen by reference to the table that indicates the agglutination reactions between the cells and sera of the different groups, there are but four possible combinations of positive and negative reactions of unknown cells with known sera II and III. Hence: If cells are agglutinated by both sera they are from Group I. If by neither sera group IV. And if by sera II they are type III. And by sera III they are type II.

In order to make a test between serum (fresh or stock) and red cells the following simple procedure with chemically clean glassware will usually suffice. A suspension of cells (about 5%) is obtained by the addition of 3 to 5 drops of blood to about 2 c.c. of one percent solution of sodium citrate in 0.9 percent sodium chloride solution. These cells need not be washed. A drop of the red cell suspension is mixed with a drop of serum on a cover slip and used as a hanging drop. A glass slide and cover slip may be used, but the hanging drop make a neater technique and avoids drying. The test should always be made microscopically to avoid possible errors.

The agglutination is usually very rapid and very definite. In order to avoid possible errors, it is always wise to wait 20 to 30 minutes. While there are few opportunities for confusion in this simple test nevertheless the penalty of transfusion of incompatible blood may be so great that every care should be given to the performance of the test. If by the method described the reaction is not clear and perfectly definite, the test must be repeated and perhaps amplified. A safe rule is never to regard as negative a reaction of which there is the least doubt. In practice it is always well to discard as a donor one whose blood causes any doubt about his group, or especially about the reaction of his cells with the patient's serum.

So far we have considered only the compatability of the bloods as regards the donor and recipient. The donor should always be selected with care. The related are said to be preferable to the non-related. Young people, male or female, are more desirable than older ones. Examination should exclude all involved in acute or chronic pathological conditions — especially the septic, syphilitic or tubercular. In the southern states one should always be sure that the donor is free from malaria. All professional donors should have a negative Wasserman reaction.

The question always arises as to the possible harm to the donor from transfusion. It is not at all uncommon that he become faint, particularly when the blood is rapidly extracted. The syncope is associated in part with the general nervous condition, attendant upon the excitement of such an operation and in part due to the sud-

den diminution in blood volume. The blood volume will however be made up rapidly from the fluid reserve of the body, and the red corpuscles will be replaced in a few weeks. When 500 c.c. are taken from the donor, he will feel as well as ever within a few hours after the operation. When 1000 c.c. are taken there may be a certain amount of lassitude for two or three days, presumably until the blood volume is entirely compensated. Several transfusions each of 500 c.c. from a single donor may be performed at intervals of a week or more without apparent disturbance of any consequence (Kimpton).

In considering the recipient of the transfused blood, it would be well to discuss what becomes of the comparent parts of the introduced blood.

In 1919 Ashby found evidence of the presence of red corpuscles after 30 days. Ames in 1922, using group IV for transfusions to other groups, by agglutination, found that the R cells live for 20-40 days in the average case. In pernicious anemia—90 days. Hopkins in 1910 found extensive phagoctosis of transfused corpuscles within twenty-four hours. With the brilliant work of Barcroft in 1925 on the pole of the spleen, as a potential reserve storehouse for R. B. blood corpuscles, comes a conception of the possibility of a portion of the transfused cells residing in this haven for indefinite periods, and on occasion re-entering the peripheral circulation.

The transfused white corpuscles are of a very short life. A leukemic donor with a W. B. C. of 150,000 gave blood to a well patient. It was found that the white count returned to normal in two and one-half hours. Kordenat and Smithers (1925) described the nonhemolytic anophylatoid delayed and constitutional responses after transfusion as probably due in part to the disintegrating white blood cells.

The platlets are very essential, aiding in the process of coagulation and tending to prevent further bleeding. The part they play in reaction is mainly conjecture.

The plasma furnishes the liquid medium and its exact relation to reactions is little understood. Ehrilick said in 1900 that "blood serum is the carrier of substances innumerable as yet little known or conceived of"—this I believe to be true today.

There is considerable information as to the results of transfusion of incompatible bloods, that is to say, bloods in which the serum of the recipient will agglutinate the red blood corpuscles of the donor. Inasmuch as only 20 to 25% of the instances where iso-agglutination occurs does iso-hemolysis occur, the chances are, of course, good that there will be no reaction of iso-hemolysis. Although the evidence indicates that iso-hemolysis is much more important clinically than iso-agglutination, nevertheless the reaction of iso-agglutination is to be avoided in the body. Hemolysis, when present, may be mild and associated in any given case with only mild hemolytic jaundice; there may be a small amount of hemoglobin in the urine or none at all. Usually with the transfusion of an incompatible blood, with which there is hemolysis, there follows a fairly definite course. The patient becomes restless and anxious, usually during the transfusion. Those experienced in transfusion recognize this and stop the operation. The patient becomes steadily more restless with rising respiratory and pulse rates and usually complains of pain in the back. Nausea and vomiting, an elevation in temperature, and a chill rapidly follow. Death may occur on the table or any time within twenty-four hours. But even in the face of a stormy time with very grave symptoms, the majority of patients recover after a high temperature with jaundice and hemoglobinuria. In some disease conditions, particularly sepsis and blood disease, the blood seems to be definitely altered with the presence of hemolysins and agglutinins not usually found. The abnormal substances cause reactions even when the donors have been selected by the usual compatability tests. These perhaps might be ruled out by proper tests for hemolysis, but probably would occur from any blood given. I have seen but one true hemolytic reaction—that occurring in a nine years old male child suffering from acute hemorrhagic purpura. He was given 300 c.c. of citrated blood from the mother, had no reaction—was improved for several days. On the fifth day following transfusion he began again to bleed, and on the sixth day was again given a transfusion of blood. The second transfusion was given by the Scannel Method and about 280 c.c. of whole blood was taken from the mother and given to the child

without any apparent difficulty. The first transfusion was done after very satisfactory compatability test, but no repeat tests were done before the second operation. About three hours after the child came from the operating room he had a profound chill lasting about an hour, his temperature rising to 106—, rapidly dropping back to 104, to 103. The skin and mucous membranes gradually blanched and there was a marked hemoglobinuria. The patient died about 16 hours after the operation. This experience bears out the theoretical assumption; that a slightly incompatible blood may be given once without any marked disturbance, the second procedure is followed by a marked and even fatal outcome.

The commonest reaction seen after transfusions is not due to hemalysis or agglutination. This type of reaction therefore, cannot be anticipated. It is probably due to the instability of the blood when removed from the body. The frequency of this type of reactions is very variable and will be found to be much less among the operators whose experience is large. The onset of the symptoms usually occur about one hour or less after transfusion and are usually entirely gone within from 12 to 24 hours. Symptoms are rarely alarming, —consisting of a chill and moderate hyperpyrexia with the attendant signs of protien intoxication. I have seen several cases of mild urticaria, but none of petechiae mentioned in the literature as occurring occasionally.

As has been indicated, with the simplification of the technical procedures involved in the transfusion of blood, and with the increased scientific understanding and control of the many factors associated with former untoward results, there has come an ever increasing number of clinical conditions in which transfusions is being used. In general transfusion is indicated in all those pathological condition where blood in quantity and quality is so altered that it is unfit to fulfill its physiological duties (Lisrinkis, 1872).

Transfusion definitely indicated in:

I. Severe hemorrhage—acute or chronic.

Traumatic, surgical, obstetrical or medical always presents the ideal indication from infancy to senility, for a replacement of the lost fluid tissue of the body. In the hemorrhagic diathesis of the new born, in puerperal hemorrhage and in hemophilia, transfusion is specific. Purpura seems refractory to this treatment except for temporary increase of platlets.

Shock—surgical or traumatic—especially with hemorrhage is best treated by transfusion. Notwithstanding the fine work of Bayliss with gum accacia during the World War.

II. Secondary anemia—turns the tide toward improvement—and enable the tissue to improve its nutrition as well as resistance.

It is of questionable value in malnutrition and prematurity; also in eclampsia.

III. Sepsis—in chronic sepsis it is distinctly beneficial—and helps the secondary anemia present.

Transfusion should never be used in acute sepsis.

IV. Primary blood diseases—all—except in pernicious anemia and may be used even then if patient's condition warrants it.

The use of auto transfusion is always questionable except possibly in unexplained hemorrhage—especially chronic. This measure is not in any sense curative and in many instances only palliative to a very limited degree.

There are many techniques, old and new, but in main there are two essentials demanded of all:—

(1) The assured delivery of blood cells which will function—and (2) the assurance to the operator of the amount of blood transfused.

The modus operandi:—

Of the methods in use today with their many modifications, two general types of procedures may be recognized.

(1) Direct blood transfusion by anastomosis of vessels with or without cannula, and

(2) Indirect transfusions with or without anticoagulants by means of syringe or parrafin tube.

I shall devote very little time to the first type of work, as I have done none or have I seen any done. The second or indirect methods are receiving the larger amount of attention at the present time—and it would be well to mention and discuss some of the most used technique.

I. Kimpton and Brown's technique of indirect blood transfusion by special blood collector and transfuser:— A large glass tube of peculiar construction is used as the collector, reservoir, and dispenser of the blood—having a corked upper

and a small side tube projecting from the large tube a little way below the upper end,—and terminating in a trapped ending (trapping when the tube is horizontal) which is drawn out into a smooth, beveled cannula-point 2 or 3 mm. in diameter. The tube is smoothly coated on its interior with paraffin. To fill the tube—insert the cannula into an incised vein or needle in a vein and blood is allowed to flow in, as it is held in a vertical position. To deliver the blood—lower the tube to the horizontal and insert the cannula into a vein of the recipient, bring the tube again to the vertical position and allow blood to flow in either by gravity or by a pressure bulb attached to upper projecting small tube. This method requires a great deal of surgical dexterity and necessitates a smooth working team. And even in the best hands a tube of blood may be lost: i. e., coagulated, before it is introduced into the recipient.

II. The Scannel and Unger transfusion sets are of a similar nature, both having a set of valves which are worked by hand in taking blood from donor into a syringe and thence into the recipient. Both of these methods are very good and usually result in the patient receiving a good amount, but occasionally not the entire amount that had been primarily desired.

III. The third whole blood transfusion method, without the use of anti-coagulants, is the multiple syringe technique. This requires several pairs of hands and provided there is no difficulty in introducing the blood into the vein of the recipient it is an ideal method. The surgeon takes the blood in a clean syringe of 20 to 30 cc. calibre—passes it to the man giving the blood, after the blood is given, the syringe is carefully washed with saline (which may have a small amount of citrate in it). While the blood is going into the patient, the donor is giving the second syringe full which is passed on in a like manner. By having six or seven syringes it is possible to carry on this process until enough blood has been transfused.

These three methods are the ones commonly used at the Rhode Island Hospital in the giving of blood to patients in whom the citrate method is not desirable; mainly in hemorrhagic and purpuric diseases. The indirect transfusion of blood treated with sodium citrate as an anti-coagulant has largely replaced direct vessel-to-vessel methods;—because of its greater simplicity, and the possibility of determining the exact amount of blood transferred. The procedure is rendered safe against coagulation during the transferal, by the admixture of an anti-coagulating sodium citrate solution.

The equipment consists of (1) a suitable supply of intravenous needles; (2) a 1000 cc. florence flask fitted with a 2 hole rubber stopper and with rubber and glass tubing—one opening for the incoming blood the other for suction; (3) measuring graduate, 25 to 55 cc. capacity; (4) and salvarsan-flask, with rubber tubing and interpolated glass connecting piece. The donor's arm is surgically prepared, and a tourniquet applied above the site of vein-puncture. A large needle is introduced directly thru the skin into the vein and the blood is allowed to pass into the florence flask, into the bottom of which the citrate solution has already been put. We use 10 c. c. of a 2½% sodium citrate solution per 100 cc. of blood. The assistant furnishes the necessary negative pressure in the flask by a suitable suction apparatus, and also gently agitates the mixture while the blood is flowing in.

The collected blood, mixed with the citrate solution, is now injected into a vein of the already prepared arm of the recipient, through a suitable needle. It is always well to use as large a needle as possible. This part of the operation is done in exactly the same way salvarsan solution is injected—first running through about 50 cc of normal saline solution to make sure that you are in the vein cleanly.

This method is the one most commonly used, because of its simplicity and the blood is not lost if there happens to be a slight mishap or delay.

In the year 1927 there were 41 transfusions done at the Rhode Island Hospital.

31 by the citrate method
3 by the multiple syringe method
3 by the Scannel method
2 by the Unger method
and 2, method not stated in record.

They were given for the following conditions:

Chronic sepsis with secondary anemia—6 transfusions.

Carcinoma (abd.) in preparation for operation —2 transfusions.

Ruptured ectopic pregnancy—7 transfusions.
Secondary aplastic anemia—2 transfusions.
Menorrhagia (causes stated)—5 transfusions.
Nephrectomy and hemorrhage with general peritonitis—4 transfusions.
Acute lymphatic leukemia and purpura hemorrhagica—1 transfusion each.
Bleeding duodenal ulcers—5 transfusions.
Traumatic hemorrhage and Shock—5 transfusions.
Abdominal hemorrhage from graffian follicle—1 transfusion.
Pernicious anemia—2 transfusions.

There were no hemolytic or agglutination reactions recognized, and the mortality rate among the transfused patients was 12%.

The non-hemalytic anaphylactoid reactions were 22.2% in those transfused by the citrate method, and 18% in those in which whole blood was given without the use of any anti-coagulant. The reactions varied from a very small rise in temperature to the most severe in a middle aged female with the secondary aplastic anemia. Her reaction began with a chill about an hour after transfusion, which contined for about an hour and was followed by a hyperpyrexia of 105,—it was 3 days before the temperature fell to normal.

In conclusion let us mention the three important things to keep in mind in doing a blood transfusion:—

1. It has been demonstrated beyond all doubt that blood is toxic in direct proportion to the chemical alteration toward coagulation, particularly dangerous, because invisible, in the preclot stage. This must always be a spur to speed and efficiency in transfusion without anti-coagulants, and where they are used, the thoroughness and completeness of the immediate effect in preventing coagalative changes must be assured.

2. In repeated multiple transfusions where sensitization against a possible foreign protien is indicated by difficulty in securing suitable donors, not only must compatibility of the formed elements be assured, but also the same precautions now used in serum (house serum) therapy should be taken i. e., desensitization.

3. In pathological conditions the plasma contains hypothetical non-specific toxins foreign to the normal state, which may act either independently or as catalyzers on the normal mechanism, to complicate or endanger the receiving of foreign blood. This obliges using fresh cells and serum in matching donor and recipient.

CHRONIC LEAD POISONING FROM SNUFF

Of three cases of chronic lead poisoning from the habitual use of snuff containing lead, reported by Joseph Uttal, New York (*Journal A. M. A.*, January 28, 1928), two resulted in marked polyneuritis with bilateral wrist drop and extensive muscular atrophy; one resulted in marked secondary anemia. All three cases were chemically proved by the identification of lead from the snuff used by the three patients. Lead was also found in significant quantities in the excreta of two of the three patients. The continued sale of this snuff constitutes a menace to public health. Snuff tobacco may contain lead from two sources: 1. Snuff wrapped in tin-foil containing a large portion of lead in its composition may cause lead poisoning if the contents become moistened by causing minute amounts of lead to pass into solution and become incorporated in the snuff. The continual inhalation of lead in small amounts will lead to chronic poisoning because of the cumulative nature of the poison and also because the respiratory tract is the most rapid source of the dissemination of lead, since it leads directly to the general circulation and avoids the detoxifying action of the liver. Such a case causing fatal poisoning was reported by Stadler. A certain specimen of snuff used by a woman was wrapped in metal foil containing 89 per cent lead, although the Swiss code of 1909 forbids the use of such foil when it contains more than 1 per cent of lead. The snuff when examined was moist and contained from 1.75 to 1.90 per cent of lead. This caused a fatal intoxication by habitual use. Zangger states that the daily dose of from 8 to 10 mg. of lead causes chronic poisoning. 2. Lead may be an actual adulterant of snuff tobacco. It is used in the process of the manufacture of snuff as a coloring agent in the form of lead chromate. In the cases reported, the snuff suspected and proved to contain lead was the most inexpensive of the available brands. This particular brand of snuff was the product of one manufacturer.

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The R. I. Medico-Legal Society—Last Thursday—January, April, June and October. Roy McLoughlin, President; Dr. Jacob S. Kelley, Secretary-Treasurer.

EDITORIALS

REMUNERATION

One who, with zeal for knowledge, seeks the source of our present success in utilizing the forces of nature for our advantage and comfort, finds all the lines of inquiry converging to the work of Michael Faraday. (1791-1867). As assistant to Humphrey Davy in the laboratories of the Royal Institute and later, as an independent worker, he made a series of discoveries and inventions unequalled in present day utility. He produced, chlorine, benzine, nitro-benzol and analine. From his work shop came the induction coil, the electric motor, the dynamo and the magneto-electric light. He showed that a ray of light could be bent from its course by an electro-magnet, thus anticipating the theory of relativity. His study of specific inductive capacity made possible the submarine cable. Davy had suggested the use of nitrous oxid gas to allay the pain of surgical operations. Faraday found that sulphuric ether had a similar effect.

For his work at the Royal Institute, Faraday received from an endowment the sum of 200

pounds a year. From other professional work he received, in 1830, 1000 pounds. This sum might readily have been increased in this and in succeeding years. At this time he was absorbed in the problem of the evolution of electricity from magnetism and deliberately decided to give up all other professional work in order to devote his time entirely to experimental science. He said, "In consequence of the good will and confidence of all around me, I can at any moment convert my time into money, but I do not require more of the latter than is sufficient for necessary purposes." For the remaining thirty-seven years of his life his income was limited to 200 pounds a year "with house, coals and candles." Considering his great personal sacrifice and on the other hand, the tremendous value of his work to humanity, was Faraday justified in his deliberate decision to remain a poor man for the benefit of science? In these days, when commercial tendencies invade the professions to a marked degree, the question is an absorbing one which each may decide as he sees fit. Faraday's decision leaves us an ideal, perhaps unattainable yet salutary. His scientific discoveries, from which humanity has profited by countless millions, to Faraday were beyond price.

NATIONAL HEALTH DEPARTMENT

The President and many members of Congress for some years have been interested in the reorganization of the executive departments. There is much over-lapping of work. There are too many bureaus in some of the departments which makes for inefficiency, for the secretary of such a department probably is not able to familiarize himself with all of the details and personnel of his department. For the sake of efficiency, in view of the frequent changes in the cabinet, it might be advisable to have more departments and not load up any one department with too much work or with such a variety of duties that the secretary cannot possibly make the department efficient.

In the departmental reorganization it would be of great help in the interest of public health to bring into one department all the bureaus which are concerned with matters pertaining to health. Vital statistics are now in the Department of Commerce, the Public Health Service in the Treasury Department and other health activities are scattered in other departments and bureaus. In many instances the secretary and bureau chiefs are neither vitally interested or properly qualified to further the interests of public health. Neither is there any effort to co-ordinate matters pertaining to public health.

Many European countries have a ministry of health headed by some physician especially qualified for his duties. For a great many years efforts have been made to establish a separate department of health at Washington but these efforts have been frustrated by politicians and by heads of bureaus who feared that they might lose the positions which they held.

It certainly is logical and there is little doubt the people generally would welcome a department of health with a cabinet member at its head. The public generally is very keen about matters concerning public health. They are convinced that the modern health movement has already accomplished great things in preventing disease.

It would not be advisable for the national department of health to take over duties now exercised by the state health department except possibly the licensing of physicians. Its duties should be confined to protect the country against entrance of infectious diseases and sick emigrants who might become public charges, to gather, publish and explain vital statistics, to supervise the manufacture and distribution of drugs, chemicals and biological products used in the treatment of the sick, to be prepared to investigate outbreaks of infectious diseases and advise the several state departments, to be prepared to take control of health matters arising during great disasters, to educate the people about public health and assist states in putting in practice such measures against disease as have been proved to be efficient, perhaps to license physicians, etc. Certainly our government has no more important task than that of guarding the health of the nation and certainly these activities are sufficiently important to justify the creation of such a new department headed by a cabinet officer.

The success of such a department depends upon the character of the secretary and his assistants and it would be highly desirable for these officers to be more or less permanent so that policies of

the department might continue. While the cabinet members are usually changed with the inauguration of each new government, it is quite possible that the secretary of this department might, if efficient, be carried from administration to administration. Precedent for this has already been established in the case of Mr. Wilson who was for many years Secretary of Agriculture.

To bring about the establishment of a national department it is necessary for several state medical societies, the American Medical Association, The American Public Health Association, and many other national associations interested in the promotion of health measures, to make a concerted effort to bring pressure to bear upon the new President and the incoming members of Congress. Both of the presidential candidates, judging by their past performances, are very much interested in promoting measures to safe-guard the nation's health. And there is little doubt the people generally would lend their support to such a change. That there might be some opposition from certain persons in government service and for personal reasons, and from certain members of certain cults, is admitted. This opposition should not and beyond doubt would not be sufficient to prevent this greatly needed reorganization.

A GRAIN OF SAND

Some of the noblest and most inspiring chapters in the history of medicine have been written by members of our profession who have devoted their entire lives to the study of its problems in research laboratories. Much has been learned in this fashion of which we should otherwise be in entire ignorance, and a great deal of our everyday practice is based upon such discoveries. To a comparatively small number, however, is granted the privilege of thus serving humanity. The majority of us work in a much larger laboratory in which countless experiments, some of them much more critical than any we would dare to perform, are constantly provided by nature. Every day we see the early stages, the progress and the end results of many such experiments and we need only study them carefully to learn a great deal about the response of the human body to infection and injury. Of late years Sir James Mackenzie was the foremost exponent of this sort of study by the practicing physician, and a large proportion of our present knowledge of heart disease is a direct result of this method of investigation. The material is constantly available; we need only observe, study and correlate what others have learned on the same subject. A simple way of doing this, and one which could well be developed in our district societies, is the presentation of case reports at all meetings; the report to include not only the individual case under discussion but a careful *resumé* of the literature upon the subject. In this and similar ways we may come to a realization of the belief of the old Dutch "Heelmaster," Jobi a Meek'ren, as he expressed it in the seventeenth century: "If each one of us adds one grain of sand to the complement of the illustrious and noble Art of Medicine, soon immense treasures and innumerable gifts will be brought together to fill the needs of ourselves, our fellow-citizens, and our posterity to cure disease surely."

SOCIETIES

THE 117th ANNUAL MEETING OF THE RHODE ISLAND MEDICAL SOCIETY JUNE 7, 1928

ORDER OF BUSINESS

Call to order	President
Reading of Minutes	Secretary

Recognition of Delegates from State Medical Societies:

1. Connecticut State Medical Society
   Dr. Walter L. Barber, Waterbury, Conn.
   Alternate
   Dr. Hugh B. Campbell, Norwich, Conn.
2. Massachusetts State Medical Society
   Dr. A. R. Crandell, Taunton, Mass.
   Dr. E. D. Gardner, New Bedford, Mass.
3. New Hampshire State Medical Society
   Dr. Deering G. Smith, Nashua, N. H.

The 117th annual meeting of the Rhode Island Medical Society was held at the Medical Library, Providence, R. I., June 7, 1928. The morning session was called to order by the President, Dr. Norman M. MacLeod, at 10:00 A. M.

The reading of the minutes of the meetings of the Council and the House of Delegates, and the

last regular meeting of the Society was presented by the secretary. This report included the annual report of the secretary, and of the Standing Committees.

The Chair recognized Dr. A. R. Crandell of Taunton, Mass., as delegate from the Massachusetts State Medical Society. Dr. Crandell presented the cordial good wishes of the Massachusetts Medical Society to this Society on the occasion of its annual meeting.

Dr. Eric Stone, secretary of the Trustees of the Fiske Fund, presented his annual report of the Fund. The Trustees reported that the prize of $250.00 offered at the last annual meeting for the best essay on the subject "Epidemic Encephalitis, Etiology, Pathology, Symptomatology and Treatment" was awarded to Dr. Charles R. Rayburn, 111 State Drive, Norman, Okla. The Trustees also announced that a prize of $200.00 for 1928-29 would be awarded for the best essay upon the subject of "Pathology, Symptomatology, Diagnosis and Prognosis of Brain Tumor."

Dr. Stanley Sprague, Chairman of the Committee on Necrology, read obituaries on the following deceased members:

REPORT OF CHAIRMAN OF COMMITTEE ON NECROLOGY

1927-1928

1. James N. Lewis, M.D.
   a. Born Pawcatuck, October 30th, 1849.
   b. Attended Hopkinton Academy, Alfred University, College of Physicians and Surgeons at Columbia University.
   c. Practiced medicine for 50 years in Ashaway. (Retired 12 years ago.)
   d. Was charter member and one time president of Washington County Medical Society; member of State Society and Am. Med. Assoc.
   e. Death due to heart trouble—May 28th, 1927.

2. William A. Sherman, M.D.
   a. Born at Newport, 1876.
   b. Graduate of Newport Schools, Harvard and Harvard Medical.
   c. Activities in Newport.
      1. Member of Medical Staff, Newport Hospital.
      2. One of the medical examiners of the city.
      3. Member of City Council.
      4. Member of Newport Board of Health.
      5. Member of Henderson Home for Aged Men Commission.
      6. Member of Newport County Medical Society; State Society.
      7. Vice President of Newport National Bank and of the Savings Bank of Newport.
   d. Death due to heart attack—June 17th, 1927.

3. Lamert Oulton, M.D.
   a. Born New Brunswick, Canada, July 4th, 1882.
   b. Early education received in Canada and New Hampshire.
   c. Received Ph.G. degree from Mass. College of Pharmacy; and M.D. degree from Tufts.
   d. Member of Active Surgical Staff, Memorial Hospital; and Associate-Surgical Staff, Homeopathic Hospital.
   e. Died July 6th, 1927.

4. Charles Peckham, M.D.
   a. Born Providence, September 11th, 1869.
   b. Educated at Mowry and Goff School, Providence; College of Physicians and Surgeons, N. Y.
   c. Practiced with father, Fenner H. Peckham, M.D.
   d. Served with Naval Reserve during the Spanish-American War.
   e. Became Surgeon General of State Militia, retiring with the rank of Brigadier General.
   f. Married January 4th, 1916.
   g. Member of Hope, University and Anawan Clubs; and Army and Navy Club of Washington.
   h. Died August 16th, 1927.

5. John J. Baxter, M.D.
   a. Born Providence, June 20th, 1860.
   b. Graduate of La Salle Academy; received M.D. degree at Bellevue Medical School, N. Y.
   c. Trustee Woonsocket Hospital; member of American Med. Assoc., R. I. Medical Society and Woonsocket Med. Soc.; Fellow of American College of Surgeons.
   d. Practiced 43 years in Woonsocket.
   e. Death due to attack of indigestion, September 13th, 1927.

6. Augustine A. Mann, M.D.
   a. Born at Randolph, Mass., 1837.
   b. Educated at Randolph schools; graduate of Jefferson College of Medicine.
   c. Enlisted in Civil War, 1862.
      1. Served as Assistant Surgeon and Lt. in first R. I. Cavalry.
      2. Prisoner at Libby Prison from June 25th to November 24th, 1863.
   d. Practiced medicine in Central Falls.
   e. Member of C. F. Common Council; charter member of Ballou Post, G. A. R.
   f. Died at age of 91 years, February 12th, 1928.

7. Lester J. Gilroy, M.D.
   a. Born Attleboro, 1897.
   b. Educated at Attleboro Schools; graduated from Tufts, 1915; graduated from Tufts Med. 1920.
   c. Interneship:—
      1. 1921—Carney Hospital, Boston.
      2. 1922—Providence City Hospital.
   d. Member of Staff at O. P. D., Memorial Hospital; member of R. I. Medical Society; Phi Chi fraternity; Knights of Columbus.
   e. Practiced in Pawtucket for past 6 years.
   f. Died April 2nd, 1928.

8. Henry C. Hall, M.D.
   a. Born 1855. (Providence?)
   b. Graduate of Harvard Medical School.
   c. Private Practice one year.
   d. Member of Staff at Butler Hospital.
   e. One of the earliest specialists in mental diseases in this country.
   f. Member of American Psychiatric Association; Boston Society of Neurology and Psychiatry; University Club.
   g. Died April 7th, 1928.

9. John F. Kerins, M.D.
   a. Born North Adams, 1860.
   b. Educated at Holy Cross College, 1883; graduate of Bellevue Hospital Medical School.
   c. Practiced in Providence.
   d. Member of R. I. Medical Society; American Medical Association; member of Elks, Eagles and Forresters.
   e. Died April 18th, 1928.

10. Alexander B. Briggs, M.D.
   a. Born Hopkinton, R. I., November 12th, 1850.
   b. Educated at Hopkinton Academy and Harvard University.
   c. Was assemblyman, banker and active in textile, twine, oil and protective firms.
   d. First practiced medicine with Dr. J. H. Merrill of Potter Hill.
   e. Member of State Board of Health; R. I. and American Medical Societies; Pan-American Medical Congress; American Public Health Association.
   f. Retired two years ago from active practice; died June 5th, 1928, at Harris.

The secretary called attention to the illness of Dr. James H. Davenport and moved that a letter of good wishes be sent to Dr. Davenport now confined in a hospital. It was so voted.

The following papers were presented:

1. "A plea for the Cross-eyed Child," Joseph F. Hawkins, M.D., Providence, R. I. Discussion by Drs. Leech, McCabe, Harvey, Dowling, Tingley, Utter, MacLeod, Van Benschoten, Hawkins.

2. "Diagnosis and Treatment of Renal and Ureteral Stone," Charles O. Cooke, M.D., Providence, R. I. Discussion by Drs. Jamieson, Kerney, Oddo, Batchelder, Cooke.

Recess was taken at 1 o'clock and luncheon was served in the Medical Library.

At 2:15 P. M. the President again called the meeting to order.

The treasurer, Dr. Jesse E. Mowry, announced the donation of $2000.00 to be known as the Herbert Terry Fund. The income from the Fund is stipulated to be used for the purchase of books and periodicals and for the binding of same for the Medical Library. The Society accepted with deep appreciation the bequest of the Herbert Terry Fund. This bequest comes to the R. I. Medical Society through the generosity of the late Arthur S. Kenyon, and his sisters, Florence and Catherine.

The following papers were read:

1. "Fundamental Principles in the Artificial Feeding of Infants," Richard M. Smith, M.D., Boston, Mass. Discussion by Drs. Calder, Utter, and Smith.

2. "Abnormalities of the Urinary Tract," (Lantern Slides) William E. Ladd, M.D., Boston, Mass. Discussion by Dr. Kingman, Dr. Oddo.

3. "Recent advances in the Classification and Treatment of Acute and Chronic Nephritis," Channing Forthingham, M.D., Boston, Mass. Discussion by Drs. Wells, Mathews, Newsam, Wing, and Forthingham.

Dr. J. E. Kerney demonstrated a new filing card for cases of syphilis.

The President, Dr. Norman MacLeod, then read the annual presidential address.

The President-elect, Dr. A. H. Harrington, was inducted into office, and the meeting adjourned to re-assemble at the Narragansett Hotel for the annual banquet. Dr. E. V. Murphy of Newport presided as Anniversary Chairman, and the Speaker of the evening was Rev. Roy Magoon, Director of the Seaman's Institute of Newport.

Adjourned.

J. W. Leech, *Secretary*

The regular quarterly meeting of the Rhode Island Medical Society was held at State Sanatorium, Wallum Lake, R. I., on Sept. 6, 1928, through the courtesy of the Board of Trustees and the Superintendent, Dr. H. L. Barnes, of the State Sanatorium.

During the morning the Fellows inspected the new Children's Building and other parts of the hospital. At 1 o'clock dinner was served at which music was furnished by a local orchestra. The

scientific session was called to order at 2:20 P. M. by the President, Dr. A. H. Harrington. The minutes of the annual meeting were read by the Secretary. The following program was presented.

Papers. 1. "The Clearing of Tuberculous Lesions from the Lungs." Lantern slides of X-ray films. Dr. Harry Lee Barnes. 2. "Tuberculosis of the Larynx, Showing of Treated Cases," Dr. Benjamin S. Sharpe. 3. "Therapeutic Pneumothorax with Demonstration," Dr. Joseph Rosenblatt.

A rising vote of thanks on motion of Dr. Wm. R. White duly seconded was extended to the Board of Trustees and the administration of the hospital for their courtesy in inviting the Society to hold its meeting there. Unfortunately rain curtailed the outdoor program, and the meeting adjourned at 3:45 P. M.

Respectfully submitted,

J. W. LEECH, M.D.

Secretary

MISCELLANEOUS

MINNEAPOLIS MEETING OF THE NATIONAL AUXILIARY

The sixth annual session of the Woman's Auxiliary to the American Medical Association was held in Minneapolis, Minnesota, June 11-15, 1928. Over 1,200 women registered and they were delightfully entertained and cared for by the local Auxiliaries.

The business meetings were largely attended, 400 women being present at the all day session of June 14. Much interest was given to the reading of the papers and State reports. There are now well organized and efficient units in 30 States.

The abstracted proceedings will be printed at an early date and a copy sent to the entire memebrship.

The following officers were elected:

President: Mrs. Allen H. Bunce, 360 Ponce De Leon Avenue N. E., Atlanta, Georgia.

President-elect: Mrs. Geo. H. Hoxie, 3719 Pennsylvania Avenue, Kansas City, Missouri.

First Vice President: Mrs. Evarts V. De Pew, 115 East Agarita Avenue, San Antonio, Texas.

Second Vice President: Mrs. David W. Parker, 52 Clark Sereet, Manchester, New Hampshire.

Third Vice President: Mrs. Horace Newhart, 212 West 22nd Street, Minneapolis, Minnesota.

Fourth Vice President: Mrs. Frank W. Gregor, 1621 North Meridian Street, Indianapolis, Indiana.

Treasurer: Mrs. Irvin Abell, 1433 South Third Street, Louisville, Ky.

Secretary: Mrs. M. T. Edgerton, 788 Penn Avenue, Atlanta, Georgia.

Parliamentarian: Mrs. F. L. Adair, 2500 Blaisdell Avenue, Minneapolis, Minnesota.

Directors for two years: Mrs. John O. McReynolds, Dallas, Tex; Mrs. Wayne W. Babcock, Philadelphia, Pennsylvania; Mrs. A. Haines Lippincott, Camden, New Jersey.

Directors for one year: Mrs. F. P. Gengenbach, Denver, Colorado; Mrs. William E. Parke, Philadelphia, Pennsylvania; Mrs. J. T. Christison, Minneapolis, Minnesota.

Chairmen of Committees

Organization: Mrs. A. T. McCormack, Louisville, Kentucky.

Health Education: Mrs. Geo. H. Hoxie, Kansas City, Missouri.

Hygeia: Mrs. A. B. McGlothlan, St. Joseph, Missouri.

Publicity: Mrs. T. C. Terrell, Forth Worth, Texas.

Program: Mrs. Southgate Leigh, Norfolk, Virginia.

Finance: Mrs. G. Henry Mundt, Chicago, Illinois.

Entertainment: Mrs. William Kuydendall, Eugene, Oregon.

Public Relations: Mrs. E. H. Cary, Dallas, Texas.

Revision of By-laws: Mrs. Morris Fishbein, Chicago, Illinois.

Special Appointments

Auditor: Mrs. C. W. Roberts, Atlanta, Georgia.

Historian: Mrs. E. V. De Pew, San Antonio, Texas.

Committee on Health Films, Chairman: Mrs. John O. McReynolds, Dallas, Texas.

Committee on Resolutions, Chairman: Mrs. J. N. Hunsberger, Norristown, Pennsylvania.

Committee on Credentials and Registrations, Chairman: Mrs. James N. Brawner, Atlanta, Georgia.

Special Advisory Committee: Mrs. S. C. Red, Houston, Texas, and Mrs. Seale Harris, Birmingham, Alabama.